

IN THE CLAIMS:

1. (Canceled)

2. (Previously Presented) A process for preparing olefinic living polymers comprising polymerizing an olefinic monomer having 2 to 20 carbon atoms at a polymerization temperature of -20 to -100°C in the presence of a catalyst comprising:

(A-1) a hafnium-containing compound having one or two cyclopentadienyl backbones,

(B) a borane compound (B-1) of the formula (I):



wherein Ph is a phenyl group which may be substituted and

(C) an aluminum compound of the formula (III):



wherein R is a hydrocarbon group having 4 to 20 carbon atoms, Y is a halogen atom, an alkoxy group, a trialkylsiloxy group, a bis(trialkylsilyl)amino group or a trialkylsilyl group, and n is 0, 1 or 2, to produce a polymer having a molecular weight distribution (Mw/Mn) of 1 to 1.3.

3. (Currently Amended) The process of Claim 1 or 2, |  
wherein said polymerization temperature is from -30 to -80°C.

4. (Currently Amended) The process of Claim 1 or 2,  
wherein said polymerization temperature is from -40 to -80°C.

5. (Canceled)

6. (Previously Presented) A process for preparing olefinic living polymers comprising polymerizing an olefinic

monomer having 2 to 20 carbon atoms at a polymerization temperature of -60 to -100°C in the presence of a catalyst comprising:

(A-2) a zirconium-containing compound having one or two cyclopentadienyl backbones,

(B) a borane compound (B-1) of the formula (I):



wherein Ph is a phenyl group which may be substituted, and

(C) an aluminum compound of the formula (III):



wherein R is a hydrocarbon group having 4 to 20 carbon atoms, Y is a halogen atom, an alkoxy group, a trialkylsiloxy group, a bis(trialkylsilyl)amino group or a trialkylsilyl group, and n is 0, 1 or 2, to produce a polymer having a molecular weight distribution (Mw/Mn) of 1 to 1.3.

7. (Currently Amended) The process of Claim 5 or 6, wherein said polymerization temperature is from -60 to -80°C.

8. (Original) A process for preparing olefinic living polymers comprising polymerizing an olefinic monomer having 2 to 20 carbon atoms at a polymerization temperature of -20 to -100°C in the presence of a catalyst comprising:

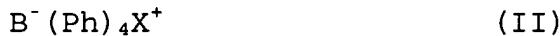
(A-2) a zirconium-containing compound having one or two cyclopentadienyl backbones,

(B) a borane compound (B-1) of the formula (I):



wherein Ph is a phenyl group which may be substituted, or

, a borate compound (B-2) of the formula (II):



wherein Ph is as defined above and X<sup>+</sup> is a cation, and

(D) a titanium-containing compound.

9. (Previously Presented) A process for preparing olefinic living polymers comprising polymerizing an olefinic monomer having 2 to 20 carbon atoms at a polymerization temperature of -20 to -100°C in the presence of a catalyst comprising:

(A-2) a zirconium-containing compound having one or two cyclopentadienyl backbones,

(B) a borane compound (B-1) of the formula (I):



wherein Ph is a phenyl group which may be substituted, or a borate compound (B-2) of the formula (II):



wherein Ph is as defined above and  $X^+$  is a cation,

(C) an aluminum compound of the formula (III):



wherein R is a hydrocarbon group having 4 to 20 carbon atoms, Y is a halogen atom, an alkoxy group, a trialkylsiloxy group, a bis(trialkylsilyl)amino group or a trialkylsilyl group, and n is 0, 1 or 2, and

(D) a titanium-containing compound.

10. (Original) The process of Claim 8 or 9, wherein said titanium-containing compound is a titanium-containing compound having one cyclopentadienyl backbone.

11. (Previously Presented) The process of Claim 8 or 9, wherein at least one of said zirconium-containing compound having one or two cyclopentadienyl backbones (A-2) and said titanium-containing compound (D) contains an alkyl group.

12. (Previously Presented) The process of Claim 8 or 9, wherein said polymerization temperature is from -30 to -80°C.

13. (Previously Presented) The process of Claim 8 or 9, wherein said polymerization temperature is from -40 to -60°C.

14. (Currently Amended) The process of any of Claims 1, 2, 5, 6, 8 and 9, wherein Ph group in said formula (I) or (II) is a group substituted by 1 to 5 fluorine atoms.

15. (Currently Amended) The process of any of Claims 1, 2, 5, 6, 8 and 9, wherein Ph group in said formula (I) or (II) is a group substituted by five fluorine atoms.

16. (Previously Presented) The process of Claim 2, 6 or 9, wherein n in said formula (III) is 0.

17. (Previously Presented) The process of Claim 2, 6 or 9, wherein in said formula (III) n is 0 and R is an alkyl group having 4 to 8 carbon atoms.

18. (Currently Amended) The process of any of Claims 1, 2, 5, 6, 8 and 9, wherein said olefinic monomer is an  $\alpha$ -olefin having 2 to 20 carbon atoms.

19. (Currently Amended) The process of any of Claims 1, 2, 5, 6, 8 and 9, wherein said olefinic monomer is an  $\alpha$ -olefin having 2 to 10 carbon atoms.

20. (Currently Amended) The process of any of Claims 1, 2, 5, 6, 8 and 9, wherein said olefinic monomer is an  $\alpha$ -olefin having 3 to 6 carbon atoms.

21. (Currently Amended) The process of any of Claims 1, 2, 5, 6, 8 and 9, wherein said polymerizing is carried out under the condition that the produced polymer is not precipitated.

22. (Currently Amended) The process of any of Claims 1, 2, 5, 6, 8 and 9, wherein said molecular weight distribution is from 1 to 1.2.